

22.4° at 6 weeks,  $p < 0.001$ ). The SPADI pain and disability score also indicated significant improvement in PRET arm at 6 weeks when compared to standard arm ( $p < 0.05$ )

**Conclusion:** Early institution of PRET program provides maximal benefit to the post surgical oral cancer patients undergoing RT than active exercises only and should be considered the standard of care.

#### EP-1062

Primary (chemo)radiation therapy in organ-sparing treatment of tongue squamous cell carcinoma

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**Purpose or Objective:** To evaluate the efficacy of primary (chemo)radiation therapy in a organ-sparing combined or radical nonsurgical treatment modality for tongue squamous cell carcinoma.

**Material and Methods:** From January 2003 to January 2015 166 consecutive patients with histologically proven the base (49 pts, 30%) and the mobile part of the tongue (MOT) cancer (117 pts, 70%) received radiotherapy +/- chemotherapy (concomitant) to the dose of 50Gy in the preoperative mode treatment and to 70Gy as radical irradiation. Most of them suffered from III (39%) and IV (35%) staged tumors, with the invasive nature of growth at 88 % and regional metastases in 70%. Patients with base of tongue (BOT) cancer had locally advanced process more often (92% vs 66%), especially stage IV (69% vs 20%). Nonresectable process was diagnosed in 38% patients with BOT cancer and in 23% cases of MOT cancer primary tumor. We also assessed tumors for potential biologic predictors of treatment effectiveness (p53, COX-2, VEGF, Ki67, E-cadherin, p21, Bcl-2 and others). Radiomodification with 5FU/cisplatin or cisplatin/cetuximab was performed in 133 (80%) cases. All patients started with photon external beam radiation to the dose of 50Gy with subsequent decision of necessity of surgery by applying our prognostic model (combined clinical and biological predictive model with multivariate analysis,  $p < 0.05$ ). Nonsurgical treatment was performed in 56 (34%) cases. Patients with BOT primary tumor underwent conservative therapy more often (62% vs 22%). Combined treatment with surgery was performed to 110 (66%) patients, with the preservation of the organ in 76 (69%) cases. Organ-sparing surgery was possible in 89 (76%) cases of MOT cancer and only in 16 (33%) cases of BOT cancer.

**Results:** After irradiation we observed complete response in 21% cases of BOT cancer and 7% of MOT cancer, partial response in 79% and 82% respectively. Stabilization and progression was diagnosed in 8% and 3% of cases MOT cancer. Complete morphological response in surgically removed tissues was obtained in 48% of BOT cancers and 22% of MOT cancers. 5-year general and disease-free survival were 70% and 58% respectively and there was not reliable difference between localizations. Surgical treatment for local relapse were performed 30 of 62 (48%) patients.

**Conclusion:** In our single experience primary (chemo)radiation therapy has been shown to be feasible and resulted in high probability of organ-sparing treatment with reliable locoregional control, survival and better quality of life.

#### EP-1063

Patient reported voice outcomes after laser surgery or radiotherapy for T1 laryngeal cancer

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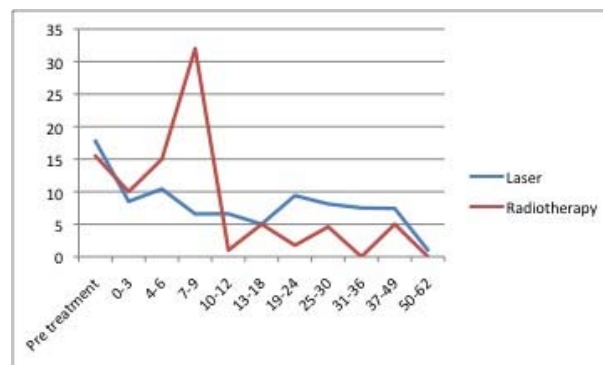
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**Purpose or Objective:** Disease free survival and overall survival figures for early laryngeal cancer (T1) are excellent

regardless of treatment modality used; either laser surgery or external beam radiotherapy. Randomised controlled trials of laser versus radiotherapy have failed to recruit. In comparing treatment modalities we must therefore look for other comparators including cost efficacy and patient reported outcomes (PROMS). Voice outcomes are an important PROM in larynx cancer treatment.

**Material and Methods:** A retrospective review of all patients treated at a regional Head and Neck centre over a 7 year period with T1a and T1b laryngeal cancers and subsequently followed up in the voice clinic. Patients were routinely asked to complete the Voice Handicap Index 10 (VHI-10) as part of standard care. The VHI-10 is an abbreviated version of the VHI which gives a subjective score of the degree of handicap experienced by the patient due to voice quality (Rosen 2004). The abbreviated score is validated and consistent. High scores indicate greater disability due to voice effects. VHI-10 scores and data on disease status were collected. Patients were treated with either Type 1,2 or 3 carbon dioxide laser cordotomy (as per ELS classification) by a single surgeon or external beam radiotherapy to 55Gy in 20 fractions in 26 days with 6MV photons to a CT planned volume to the larynx only (no elective nodal irradiation)(PTV = CTV+5mm). Patients treated with radiotherapy usually had contraindications to laser surgery (tumour position or access).

**Results:** 44 patients were identified with follow-up VHI data, 30 of these had been treated with laser surgery (28 with T1a) and 14 with radiotherapy (8 with T1a). Mean follow up was 3.01 years (0.5-5 years). Recurrence occurred in two patients after laser. One patient underwent further laser excision and the other received radiotherapy. There was 100% disease specific survival. The results were analysed by a General Linear Regression model with multiple imputations to address response gaps, using an SBS analysis tool. Both groups showed a statistically significant increase in mean VHI-10 scores over time and from pre-treatment baselines. VHI scores were higher for the radiotherapy treated cohort in the first year of follow up. Return to a VHI score of less than 10 was 6-9 months for laser and 9-12 months for radiotherapy. Graph shows average VHI score from pre-treatment up to 62 months post treatment.



**Conclusion:** PROMs are an appropriate way to compare treatment modalities with similar disease outcomes. The VHI-10 is an appropriate PROM for patients treated for laryngeal cancer. In an unselected retrospective population subjective voice outcomes are no worse with laser than with radiotherapy and therefore laser may be a preferred option due to lower cost and greater convenience.

#### EP-1064

Reirradiation results in head and neck tumours

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**Purpose or Objective:** The treatment of choice for recurrences or second tumors of head and neck area, in areas